

Amendments to the Abstract:

Pursuant to 37 C.F.R. § 1.121(b) kindly amend the abstract as follows. Amendments to the abstract are made by presenting replacement paragraphs or sections marked up to show changes made relative to the immediate prior version. The changes in any amended paragraph or section are being shown by strikethrough (for deleted matter) or underlined (for added matter):

This engine relies on a flywheel having a flywheel axis and an undulating cam surface. A piston with a roller at its base is positioned in a cylinder such that the roller abuts the undulating cam surface at some radial distance from the flywheel axis. Thus, as the piston is pushed downward by combustion pressure in the cylinder, it pushes against the cam surface causing the flywheel to rotate. As the flywheel continues to rotate its undulating surface pushes the piston back into position for a repetition of the cycle. The cam surface can be configured to control engine parameters such as compression ratio, duration of intake stroke, duration of exhaust stroke, duration of combustion stroke, duration of power stroke, compression stroke pattern, volumetric efficiency, or power stroke pattern. ~~More complex embodiments include one in which undulating surfaces are located on opposite faces of the same flywheel with separate pistons interacting with each face and one in which undulating surfaces are located on facing surfaces of two separate flywheels with pistons positioned between the flywheels. In the latter embodiment, pistons can share the same cylinder.~~